

THEORETICAL PERSPECTIVES AND CONCEPTUAL FRAMEWORKS OF COOPETITION

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ABSTRACT

There are several perspectives that provide useful theoretical frameworks for analyzing coopetition based on its original paradigm – competition and cooperation. They are transaction–cost economics, resource-based view, game theory, industrial-organization, socioeconomics and social network analysis. Theoretical perspectives then developed to conceptual frameworks that explain and predict empirical phenomena of coopetition. The frameworks of coopetition vary from a continuum with cooperation and competition at its ends to the tendency to adopt multidimensionality under orthogonal structure between two constructs of competition and cooperation. – briefly drawing the typology of coopetition with competition and cooperation constructs as its axis.

Keywords: *coopetition, theoretical perspectives*

INTRODUCTION

Coopetition is investigated under the inter-organizational relationship realms. It is lying between two diametrically different logics of interaction cooperation and competition (Bengtsson and Kock, 2000), from where the new research domain also get its name.

Competition traditionally depicted as direct rivalry between firms. Beneath the industrial organization perspective, Porter (1986) brings the notions to win competition by overcoming the threats or power of substitute products, new competitors, competitive rivalry, customers and suppliers. The other distinguished way to succeed in competition is to exploit but at the same time to maintain the key resources – that is the resources which have the properties of being valuable, rare, in-imitable and non-substitutable (Barney, 1986). Interweaving Porter's five and the VRIN properties of key resources, Barney

(1991) endorses Resource-Based View (RBV) the concept Wernerfelt (1984) once affirmed. This approach turns to be one of the significant perspective used in examining coopetition.

Cooperation is frequently considered the antithesis of competition, since it is a recursive process where two or more firms work together toward an intersection of common goals. Within the cooperative paradigm, the business world is composed of a network of interdependent relationships developed and fostered through strategic collaboration with the goal of deriving mutual benefits (Contractor and Lorange, 1988 in Lado, Boyd, and Hanlon, 1997). The inter-firm cooperation agreement means a strategic option of adjustment to gain access to resources that firm does not have but are indispensable for its sustainability or progress. Quintana-Garcia and Benavides-Velasco (2004) elaborate resources as abilities and knowledge and sustainability and

progress narrowly refer to new product development process.

Coopetition gets its paradox from the simultaneously existence of cooperation and competition in the relationship. On one side, coopetition deals with enmity due to conflicting interests related to obtain competitive advantage and on the other side with necessity to develop trust and mutual commitment to achieve common aims, both towards the same entity. Several theoretical perspectives have been used to analyze this new stream of research area, they are resource-based view, game theory, transaction-cost economics, socio-economics and social network analysis. Researchers tend to intertwine the perspectives rather to use a single one to explain the phenomenon.

THE PERSPECTIVES

Resource-Based View.

From Resource based-view, competitive advantage comes from owning valuable, rare, inimitable, non-substitutable capabilities that allow the firm to offer its customers better value than competitors. Fundamentally, two assumptions underpin this approach: (a) firms are heterogeneous with respect to their resource profiles and (b) those resources are not perfectly mobile across firms (Barney, 1991). Sustained differences in firms' profits may be attributed to differences in resources and not necessarily to a particular industry's structural conditions. Accordingly, unique resources and capabilities enable the firm to generate economic rents, leading to sustained competitive advantage.

Based on how economic rent are generated and sustained, two approaches then develop from RBV perspective. The first perspective emphasizes the importance of VRIN properties of

resource to guarantee the creation and furthermore the sustainability of firm's competitive advantage. The other approach evolves around the idea of how sustainability of competitive advantage strongly depends on firm's ability to develop capabilities for innovations. This dynamic capability-based approach emphasizes skill acquisition, learning and capability accumulation which provide a convenient basis on which the accumulation of resource stock through coopetition will be examined.

Game Theory

Game theory represents another conceptual framework for examining the potential of rent creation through coopetition strategy (Brandenburger and Nalebuff, 1996). According to Okura (2007) game theory has the following three advantages for analyzing the coopetition. First, game theory can contain some strategic interactions among direct firms (competitor), the industrial profits entirely are related not only to a firm's decisions, but also to those of others. Second, game theory can represent a complex situation by a very simple model. Game theory permits analyzing a complex situation by distinguishing in an analytical fashion the cooperative and competitive issues that are interwoven in the real world situation. Third, game theory gives a very rigorous analytical methods.

In the terminology of game theory, coopetition can be depicted as an extensive-form game containing both cooperative (positive-sum game) and competitive (zero-sum game) stages. By this nature, coopetition can be viewed as "variable-positive-sum game". The solution of an extensive-form game is expressed as sub-game perfect equilibrium. This equilibrium can be derived using backward induction, which means solving the optimal choice of the

last stages in all possible situations and then working backward to compute the optimal choice. Mathematical analysis on the equilibrium is the backbone of this perspective.

Industrial Organization Socio-economics - Social Network Analysis.

Beside game theory and RBV, Lado et. al. (1997) also exploit socioeconomics perspective to explore coopetitive behavior of firms. By socioeconomics approaches, Lado, et al. (1997) fuse economical, sociological, psychological (behavior studies) even mention biological approaches to conclude the main idea that firms are not just economic beings, they are also social ones. The firms tied in certain norms and ethics, so beside maximizing their utility function, they are also considering the moral sentiment and/or value.

Bengtsson and Kock (2000) combine the perspective of industrial organization (economics) and network perspective when depicting the paradoxical nature of coopetition. Network approach which focuses more in the (both vertical or horizontal) relationships adjoined with industrial organization which interests is on the industry structure. With these perspective, the cooperation and the competition can be denoted to happen within a coopetitive relationship involving the same entities. The dominance degree whether of cooperation or competition in the coopetitive relationship together with the propositions become the significant results from this study.

I found network approaches go along with the focus of socioeconomics perspective. The idea of network embeddedness from Gnyawali and Madhavan (2001) confirm how behaviors of a firm give impacts on the entire networks and vice versa. This viewpoint

also gives space for explanation on the dynamic of coopetitive relationship. The relationship changes the direction over certain time range due to the interactions happened in the network. This approach also frequently used to confirm the knowledge and technological (and other resources, e.g. trust (Castaldo and Dagnino, 2004)) flows in the relationship.

Social network analysis is built based on an assumption of the importance of relationships among interacting units. The social network perspective encompasses theories, models, and applications that are expressed in terms of relational concepts or processes. A "social network" is defined as a group of collaborating entities that are related to each other. Mathematically, this is a graph (or a multi-graph); each participant in the collaboration is called an *actor* and depicted as a node in the graph. Actors can be persons, organizations, or groups—any set of related entities. Valued relations between actors are depicted as links between the corresponding nodes.

Four things related to actors, relations, network focus and structure are considered important in social network analysis. First, actors and their actions are viewed as interdependent rather than independent, autonomous units. Second, relational ties (linkages) between actors are channels for transfer or "flow" of resources (either material or nonmaterial). Next, network models focusing on individuals view the network structural environment as providing opportunities for or constraints on individual action. And network models conceptualize structure (social, economic, political, and so forth) as lasting patterns of relations among actors. The unit of analysis in network analysis is not the individual, but an entity consisting of a collection of individuals and the linkages among them. Network methods focus on dyads (two actors and their ties), triads (three actors

and their ties), or larger systems (subgroups of individuals, or entire networks (Wasserman and Faust, 1994).

In explaining the structure of the network, social network analysis introduced the network centralization indices. Network centralization indices explain the topology of the network. Network may have one (or more) actor(s) that dominate(s) as in the star topology; or the connectedness is equally distributed among nodes and forms the circle topology. As for the importance of every actors in the network, social network analysis used the unit centrality measures. Both network centralization indices and unit centrality measures consist of degree, closeness and betweenness measures. Degree centrality measure represents number of ties an actor has with other actors in the network. Closeness centrality represents number of shortest path an actor has with other actors in the network. Betweenness centrality of an actor indicates the number of relations between two other actors in the network that regard it as connecting node.

Drawn from Burt's (1992) influential work on structural holes, structural autonomy is a key actor-level property: a structurally autonomous actor has structural holes between the actors it is connected to but is free of structural holes at its own end. If actor A has ties to both B and C but B and C are not tied directly to each other—that is, B and C can reach each other only through A—a structural hole exists between B and C, which can be exploited by A. Structural holes enhance information benefits in several ways: diversity of contacts across unconnected groups means less redundancy and higher quality of information, earlier access to new information, and inclusion in more interactions. Similarly, a network rich in structural holes presents opportunities for control, in that the focal actor can "put a

spin on" information flows between disconnected actors. While structural holes are the underlying phenomena, structural autonomy is the network property of actors who have relationships free of structural holes at their own end and rich in structural holes at the other end. (Gnyawali and Madhavan, 2001).

Transaction Cost Economics (TCE).

According to Williamson (1998), transaction cost economics (TCE) is the interdisciplinary field of law, economics and organization, dealing with governance of transactions, adopting a contractual approach to economic organization. A transaction (exchange) occurs when a good or service is transferred across a technically separable interface. Governance is the means to accomplish order in an exchange relationship, in which potential conflict threatens to diminish mutual gains. TCE doesn't not estrange friction in the inter-firm relationship, in fact friction becomes the engine of the economic system.

Much of the TCE literature centers on make-or-buy decisions, with choice of mode influenced by the markets for those goods and necessary investments in facilities to produce or utilize those goods (Park and Russo, 1996). Eriksson (2006) then continue the tradition by associating the three dimensions of TCE, (i.e.: asset specificity, uncertainty and frequency) with the three different structures and the governance mechanism, that is market – price, hierarchy – authority and hybrids – trust to build the model for procurement procedure of construction firms. Even though the empirical results do not agree with the proposed hypothesis, yet the model succeeds to capture the description of client and contractor relationship that is still dominated by the competitive behaviors.

FRAMEWORKS

From Perspectives to Frameworks.

Some distinguished cooperation propositions, hypothesis and frameworks developed from thorough exposition of theoretical perspectives. Among the earliest framework which still used as

references is the Syncretic Model of Rent-Seeking Strategic Behavior by Lado et al. (1997). Figure 1 depicts the model rigidly formulated on the basis of RBV, game theory and socioeconomic perspectives. Syncretic rent-seeking behavior in this model places the

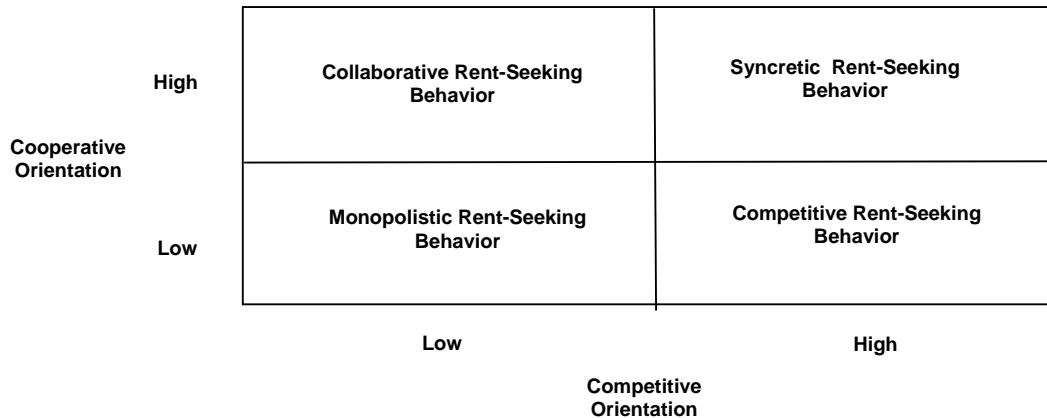


Figure 1 A Syncretic Model of Rent-Seeking Strategic Behavior (Lado, et al. – 1997)

cooperation among other possible behaviors. So the dialectical perspective of cooperation suggested by Brandenburger and Nalebuff (1996) not

only seen as a single unit composed by two extremes that is pure cooperation and pure competition (see Figure 2).



Figure 2 Competition – Cooperation Dimension (Brandenburger and Nalebuff, 1996)

The dimension then developed by Bengtsson and Kock (2000) using the network and industrial organization (economics) and network approaches makes the dimension appeared with more details about the cooperation continuum

(see Figure 3). Galvagno and Garraffo (2008) add the element of time and direction to the continuum to accentuate the dynamic of cooperative relationship. It changes its direction over a particular time span.

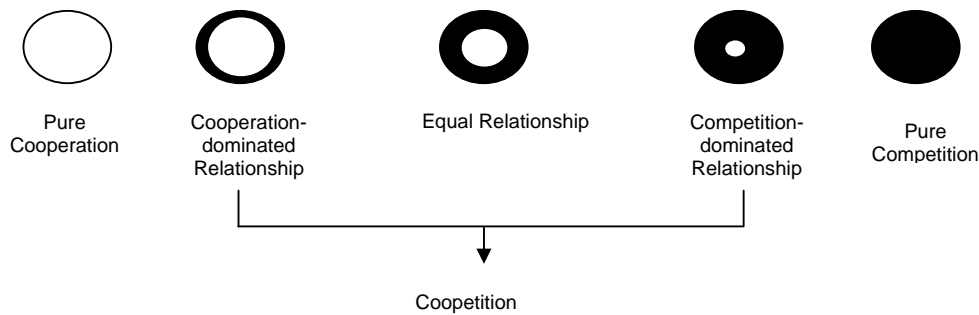


Figure 3 Types of Coopetitive Relationship
(Bengtsson and Kock, 2000)

Examples of the similar framework built on the basis of socio- (includes the psychological)-economic perspectives also given by Castaldo and Dagnino (2004). Coopetition in the study composed in two dimensions, that is: (1) content dimension which covers social and economic aspects and (2) process

dimension that includes competition and cooperation. The basic concept of coopetition is shown in Figure 4. This description of dimension then followed by other several descriptions of coopetition typologies drawn on the same axis.

		COOPETITION	
		COMPETITION	COLLABORATION
RELATIONAL DIMENSION	ECONOMIC	MARKET POWER & PRICE	GAME THEORY & PAY-OFF FOR COLLABORATION
	SOCIAL	SOCIAL POWER & CONFLICT	SOCIAL CAPITAL & TRUST

Figure 4 Basic Concept of Coopetition (Castaldo and Dagnino – 2004)

The work of Castaldo and Dagnino (2004) eventually develop what Mandal (2004) summarizes as conventional cooperation competition framework (Figure 5). Coopetition is defined as multidimensional variable, which may

assume a number of different values, especially when observed in an orthogonal structure between the two constructs of competition and cooperation.

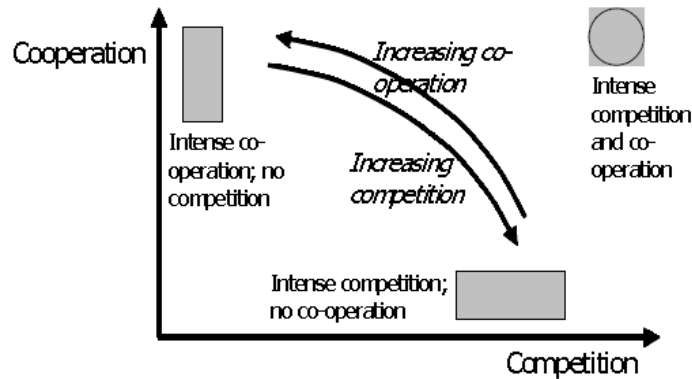


Figure 5 Conventional Cooperation Competition Framework (Mandal, 2004)

CONCLUSION

Galvagno and Garraffo (2008) conclude that coopetition has not had any well-defined theoretical perspective yet. The prominent perspective applied for scrutinizing coopetition are resource based-view, game theory, transactions cost economics and social network analysis. Researchers tend to intertwine the perspectives rather to use a single one to explain the phenomenon. This propensity is performed to consider coopetition as a new entity, not only a hybrid of its main paradigms, cooperation and competition.

Yet to date, coopetition is mostly explained and examined using theoretical perspectives that treat competition and cooperation as two paradigm separately. This fact leads to the lack of conceptual framework that can explain and predict empirical phenomena of coopetition. Multidimensionality that accommodates orthogonality seems potential to depict the typology of coopetition. Exploring other theoretical perspectives and developing conceptual frameworks definitely become important stages to confirm coopetition as new form of research field in management strategic.

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